

REMARKS

Reconsideration and allowance are respectfully requested in light of the above amendments and the following remarks.

Applicants acknowledge with appreciation the indication in the Office Action that claims 2, 15-17, 20, 21, and 23 are allowed.

Claims 39 and 40 have been newly added, and claims 1, 2, 7-19, 24, 29, 32, 33, and 38 have been amended to better define the subject matter Applicants regard as their invention. Support for the subject matter defined by these claims is provided at least in the original claims and Figs. 4, 17, and 19 and their accompanying descriptions in the specification. The amendments of claims 2 and 15-17 were not made for reasons related to the patent laws; therefore, no estoppel is deemed attachable thereto. Claims 39 and 40 emphasize a specific sequence for successively reflecting light off the surfaces of the light guide means recited in claims 1 and 14, respectively.

Claims 1, 3, 4, 9, 10, 14, 18, 19, 22, and 24 were rejected, under 35 USC §102(b), as being anticipated by Tosaki (US 5,712,649). Claims 5, 6, 11, 12, 20, 21, 28, and 29 were rejected, under 35 USC §103(a), as being unpatentable over Tosaki. Claims 7, 8, 13, 32, 33, and 38 were rejected, under 35 USC §103(a), as being unpatentable over Tosaki in view of Novis

et al. (US 5,867,795). To the extent these rejections may be deemed applicable to the amended claims, Applicants respectfully traverse.

Claim 1 now recites:

A virtual image display apparatus comprising a real image display part for displaying an image, an image magnifying means for optically magnifying the image displayed in the real image display part so as to form a virtual image, and a light guide means for guiding light from the real image display part to the image magnifying means,

said light guide means being formed in a triangular columnar shape having a substantially isosceles triangular cross-section, and having: (1) a first surface serving as a light incident surface, a light emanating surface, and a reflective surface, (2) a second surface serving as a first internal reflecting surface, and (3) a third surface serving as a second internal reflecting surface, wherein:

emanating light from the real image display part is incident upon and enters the light guide means through the first surface,

the entering light is successively internally reflected by: (1) the first internal reflecting surface, (2) the reflective surface of the first surface, and (3) the second internal reflecting surface, and

the successively reflected light emanates from the light guide means through the emanating surface of the first surface and enters into the image magnifying means.

Tosaki fails to disclose the combined features recited in claim 1 whereby the light entering a light guide means is successively internally reflected by: (1) a first internal reflecting surface, (2) another reflective surface, and (3) a second internal reflecting surface. Tosaki also fails to

disclose the claimed feature whereby the surface of the light guide means that receives the entering light also internally reflects this light and subsequently passes this light outside the light guide means.

By contrast to the above-noted claimed features, Tosaki discloses in Fig. 3 a triangular prism 13 that is disposed in front of an image light emitting unit 12 in a housing 2. Light emitted by image light emitting unit 12 enters prism 13 at a first surface 13a. The entering light that is directed toward the right side of prism 13 is reflected by a second surface 13b of prism 13 toward a left-side mirror 14 that is disposed externally to prism 13. Similarly, the entering light that is directed toward the left side of prism 13 is reflected by a third surface 13b of prism 13 toward a right-side mirror 14 that is disposed externally to prism 13.

As illustrated by Tosaki's Fig. 3, the light entering prism 13 experiences a single reflection by either the second surface or third surface of prism 13 before this light is emitted by the prism. Therefore, Tosaki does not disclose, as recited in claim 1, a light guide means that successively internally reflects received light on: (1) a first internal reflecting surface, (2) another reflective surface, and (3) a second internal reflecting surface.

Moreover, an inspection of Tosaki's Fig. 3 reveals that the received light enters prism 13 through a first surface 13b and exits the prism through another surface 13b. Tosaki's Fig. 3 makes clear that the surface receiving the entering light, surface 13a, does not internally reflect this light and does not subsequently pass this light outside the prism. Instead, Tosaki's system is structured to receive light on a first surface of prism 13, reflect the received light on a second surface of prism 13, and pass the reflected light outside through a third surface of prism 13. As a result, Tosaki does not disclose the feature recited in claim 1 whereby the surface of the light guide means that receives the entering light also internally reflects this light and subsequently passes this light outside the light guide means.

In accordance with the above discussion, Applicants submit that Tosaki does not anticipate the subject matter defined by claim 1 wherein the light entering a light guide means is successively internally reflected by: (1) a first internal reflecting surface, (2) another reflective surface, and (3) a second internal reflecting surface. Additionally, Tosaki does not disclose the claimed feature wherein the surface of the light guide means that receives the entering light also internally reflects this light and subsequently passes this light outside

the light guide means. Therefore, allowance of claim 1 and all claims dependent therefrom is warranted.

Claim 9 now recites:

*A virtual image display apparatus comprising:
an image forming means for forming an image,
an image magnifying means for optically magnifying
the image formed by the image forming means so as to
create a virtual image, and
a light guide means for guiding light from the
image forming means to the image magnifying means,
wherein:*

*a spatial operating distance is less than about
100 mm, and*

*an optical path length extending from the light
guide means to an eye point is larger than a value
which is three times as large as the thickness of the
light guide means.*

Tosaki fails to disclose the features recited in claim 9 of:

(1) a spatial operating distance that is less than about 100 mm
and (2) an optical path length extending from a light guide means
to an eye point that is larger than a value which is three times
as large as the thickness of the light guide means.

As may be seen by inspection of Tosaki's Fig. 3, the spatial operating distance of Tosaki's device uses most of the enclosed volume of headset 1. And the enclosed portion of headset 1 appears, in Fig. 1, to have a width greater than that of a user's head and a length of several inches. Therefore, Tosaki does not disclose a spatial operating distance of less than 100 mm, as proposed in the Office Action (Office Action page 3, lines 2-3).

Applicants further submit that Tosaki does not disclose in Fig. 3 an optical path length from the center of the image forming means to the eye point that is three times as large as the thickness of the prism.

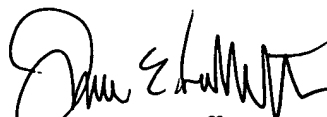
Accordingly, Applicants submit that the subject matter defined by claim 9 is not anticipated by Tosaki. Therefore, allowance of claim 9 and all claims dependent therefrom is warranted.

Claim 14 now recites features similar to those distinguishing claim 1 from Tosaki. For similar reasons that these features distinguish claim 1 from Tosaki, so too do they distinguish claim 14. Therefore, allowance of claim 14 and all claims dependent therefrom is warranted.

In view of the above, it is submitted that this application is in condition for allowance and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,



James E. Ledbetter
Registration No. 28,732

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JEL/DWW/att

Attorney Docket No. L7016.01109
STEVENS DAVIS, MILLER & MOSHER, L.L.P.
1615 L Street, N.W., Suite 850
P.O. Box 34387
Washington, D.C. 20043-4387
Telephone: (202) 785-0100
Facsimile: (202) 408-5200